Coal Mercury Data File

SUMMARY DATA

A-96-47
II-A-9

Plant name	Unit name	Boiler/NOx type	PM control	SOx control
Bruce Mansfield	1	CONV/PC/NOX/DRY	PARTSCRUB	NONE
Craig	C3	CONV/PC/NOX/DRY	BAGHOUSE	SDA
Craig	C1	CONV/PC/NOX/DRY	ESP- HS	WETSCRUB
Bailly	7	CYCLONE/NONOX/WET	ESP- CS	WETSCRUB
AES Hawaii, Inc.	A	FBC/SNCR	BAGHOUSE	FBC
Bay Front Plant Generating	5	CYCLONE/NONOX/WET	MECH	COMP COAL
Presque Isle	6	CONV/PC/NONOX/WET	ESP- CS	COMP COAL
Presque Isle	5	CONV/PC/NONOX/WET	ESP- CS	COMP COAL
Presque Isle	9	CONV/PC/NOX/WET	ESP- HS	COMP COAL
TNP-One	U2	FBC/NONOX	BAGHOUSE	FBC
St Clair Power Plant	4	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL
Big Bend	BB03	CONV/TURBO/NOX/WET	ESP- CS	WETSCRUB
Navajo	3	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB
Valmont	5	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL
Intermountain	2SGA	CONV/PC/NOX/DRY	BAGHOUSE	WETSCRUB
Stockton Cogen Company	GEN1	FBC/SNCR	BAGHOUSE	FBC
Montrose	1	CONV/PC/NOX/DRY	ESP- CS	COMP COAL
Rawhide	101	CONV/PC/NOX/DRY	BAGHOUSE	SDA
Valley	2	CONV/PC/NOX/DRY	BAGHOUSE	NONE
Shawnee Fossil Plant	3	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL
Jim Bridger	BW 74	CONV/PC/NOX/DRY	ESP- CS	WETSCRUB
Laramie River Station	1	CONV/PC/NOX/DRY	ESP- CS	WETSCRUB
Laramie River Station	3	CONV/PC/NOX/DRY	ESP- CS	SDA
La Cygne	1	CYCLONE/NOX/WET	PARTSCRUB	WETSCRUB
Cliffside	1	CONV/PC/NONOX/DRY	ESP- HS	NONE
Sherburne County Generating Plant	#3	CONV/PC/NOX/DRY	BAGHOUSE	SDA
Meramec	4	CONV/PC/NOX/DRY	ESP- CS	NONE
Colstrip	3	CONV/PC/NOX/DRY	PARTSCRUB	WETSCRUB
GRDA	2	CONV/PC/NOX/DRY	ESP- CS	SDA
Coronado	U1B	CONV/PC/NOX/WET	ESP- HS	WETSCRUB
Newton	2	CONV/PC/NOX/DRY	ESP- CS	COMP COAL
Salem Harbor	3	CONV/PC/NOX/SNCR/DRY	ESP- CS	COMP COAL
Columbia	1	CONV/PC/NOX/DRY	ESP- HS	COMP COAL
Cholla	3	CONV/PC/NONOX/DRY	ESP- HS	NONE
Cholla	2	CONV/PC/NONOX/DRY	MECH/PARTSCRUB	WETSCRUB
Platte	1	CONV/PC/NOX/WET	ESP- HS	COMP COAL

Plant name	Unit name	Boiler/NOx type	PM control	SOx control
Wyodak	BW 91	CONV/PC/NOX/DRY	ESP- CS	SDA
Brayton Point	1	CONV/PC/NOX/DRY	ESP- CS	COMP COAL
Brayton Point	3	CONV/PC/NOX/DRY	ESP- CS	COMP COAL
Antelope Valley Station	B1	CONV/PC/NOX/DRY	BAGHOUSE	SDA
Lawrence	4	CONV/PC/NONOX/DRY	PARTSCRUB	WETSCRUB
Clay Boswell	2	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL
Clay Boswell	3	CONV/PC/NOX/DRY	PARTSCRUB	WETSCRUB/COMP COAL
Clay Boswell	4	CONV/PC/NOX/DRY	PARTSCRUB	WETSCRUB
Clifty Creek	6	CONV/PC/NOX/WET	ESP- HS	COMP COAL
Leland Olds Station	2	CYCLONE/NONOX/WET	ESP- CS	NONE
Dwayne Collier Battle Cogeneration Facility	2B	STOKER/NOX/DRY	BAGHOUSE	SDA
Comanche	2	CONV/PC/NOX/DRY	BAGHOUSE	COMP COAL
Gibson Generating Station (0300)	3	CONV/PC/NOX/DRY	ESP- CS	NONE
Gibson Generating Station (1099)	3	CONV/PC/NOX/DRY	ESP- CS	NONE
Wabash River Generating Station	1 + 1A	COAL GAS	COAL GAS	COAL GAS
George Neal South	4	CONV/PC/NOX/DRY	ESP- CS	COMP COAL
Nelson Dewey	1	CYCLONE/NONOX/WET	ESP- HS	COMP COAL
Widows Creek Fossil Plant	6	CONV/PC/NONOX/DRY	ESP- CS	COMP COAL
Sam Seymour	3	CONV/PC/NONOX/DRY	ESP- CS	WETSCRUB
Polk Power	1	COAL GAS	COAL GAS	COAL GAS
R.M. Heskett Station	B2	FBC/NONOX	ESP- CS	FBC
Stanton Station	1	CONV/PC/NOX/DRY	ESP- CS	NONE
Stanton Station	10	CONV/PC/NOX/DRY	BAGHOUSE	SDA
Charles R. Lowman	2	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB
Dunkirk	2	CONV/PC/NOX/DRY	ESP- HS	COMP COAL
Jack Watson	4	CONV/PC/NOX/DRY	ESP- CS	NONE
San Juan	2	CONV/PC/NONOX/DRY	ESP- HS	WETSCRUB
Mecklenburg Cogeneration Facility	GEN 1	CONV/PC/NOX/DRY	BAGHOUSE	SDA
Port Washington	4	CONV/PC/NONOX/DRY	ESP- CS	SORBENT INJ
Lewis & Clark	B1	CONV/PC/NOX/DRY	PARTSCRUB	NONE
Clover Power Station	2	CONV/PC/NOX/DRY	BAGHOUSE	WETSCRUB
W. H. Sammis	1	CONV/PC/NONOX/DRY	BAGHOUSE	NONE
Big Brown	1	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	NONE
Gaston	1	CONV/PC/NOX/DRY	ESP- HS	NONE
Coyote	1	CYCLONE/NONOX/WET	BAGHOUSE	SDA
Limestone	LIM1	CONV/PC/NOX/WET	ESP- CS	WETSCRUB

Plant name	Unit name	Boiler/NOx type	PM control	SOx control
SEI - Birchwood Power Facility	1	CONV/PC/NOX/SCR/DRY	BAGHOUSE	SDA
Logan Generating Plant	GEN 1	CONV/PC/NOX/SCR/DRY	BAGHOUSE	SDA
Kline Township Cogen Facility	GEN1	FBC/NONOX	BAGHOUSE	FBC
Monticello	1	CONV/PC/NONOX/DRY	ESP- CS/BAGHOUSE	NONE
Monticello	3	CONV/PC/NONOX/DRY	ESP- CS	WETSCRUB
R. D. Morrow Sr. Generating plant	2	CONV/PC/NOX/DRY	ESP- HS	WETSCRUB
AES Cayuga (NY) (formerly NYSEG Milliken)	2	CONV/PC/NOX/DRY	ESP- CS	WETSCRUB
Scrubgrass Generating Company L. P.	GEN1	FBC/NONOX	BAGHOUSE	FBC

Plant name	name of fuel 1	average Hg in fuel (ppmw)	name of fuel 2	average Hg in fuel (ppmw)
Bruce Mansfield	PETROLEUM COKE	0.0100	BITUMINOUS	0.1330
Craig	SUBBITUMINOUS	0.0254	BITUMINOUS	0.0367
Craig	SUBBITUMINOUS	0.0254	BITUMINOUS	0.0367
Bailly	BITUMINOUS - LOW SULFUR	0.0254	BITUMINOUS - HIGH SULFUR	0.0600
AES Hawaii, Inc.	SUBBITUMINOUS	0.0279	TIRES	0.0211
Bay Front Plant Generating	BITUMINOUS	0.0289	PETROLEUM COKE	0.0087
Presque Isle	BITUMINOUS/PETROLEUM COKE	0.0300	SUBBITUMINOUS	0.0508
Presque Isle	BITUMINOUS/PETROLEUM COKE	0.0300	SUBBITUMINOUS	0.0508
Presque Isle	BITUMINOUS/PETROLEUM COKE	0.0300	SUBBITUMINOUS	0.0508
TNP-One	LIGNITE	0.0310		
St Clair Power Plant	SUBBITUMINOUS	0.0344	BITUMINOUS	0.0875
Big Bend	SUBBITUMINOUS	0.0348	BITUMINOUS	0.1035
Navajo	BITUMINOUS	0.0374		
Valmont	BITUMINOUS	0.0388		
Intermountain	BITUMINOUS	0.0391	PETROLEUM COKE	0.0117
Stockton Cogen Company	BITUMINOUS	0.0404	PETROLEUM COKE	0.0293
Montrose	SUBBITUMINOUS	0.0422		
Rawhide	SUBBITUMINOUS	0.0469		
Valley	BITUMINOUS/PETROLEUM COKE	0.0475		
Shawnee Fossil Plant	BITUMINOUS	0.0482	SUBBITUMINOUS	0.1064
Jim Bridger	SUBBITUMINOUS	0.0501	BITUMINOUS	0.0480
Laramie River Station	SUBBITUMINOUS	0.0521		
Laramie River Station	SUBBITUMINOUS	0.0521		
La Cygne	SUBBITUMINOUS	0.0523	BITUMINOUS	0.1249
Cliffside	BITUMINOUS	0.0523		
Sherburne County Generating Plant	SUBBITUMINOUS	0.0528		
Meramec	SUBBITUMINOUS	0.0539	BITUMINOUS	0.0896
Colstrip	SUBBITUMINOUS	0.0555		
GRDA	SUBBITUMINOUS	0.0557	BITUMINOUS	0.0771
Coronado	SUBBITUMINOUS	0.0569		
Newton	BITUMINOUS	0.0570	SUBBITUMINOUS	0.0546
Salem Harbor	BITUMINOUS	0.0571		
Columbia	SUBBITUMINOUS	0.0575		
Cholla	SUBBITUMINOUS	0.0582	BITUMINOUS	0.0429
Cholla	SUBBITUMINOUS	0.0582	BITUMINOUS	0.0429
Platte	SUBBITUMINOUS	0.0608		

Plant name	name of fuel 1	average Hg in fuel (ppmw)	name of fuel 2	average Hg in fuel (ppmw)
Wyodak	SUBBITUMINOUS	0.0633		
Brayton Point	BITUMINOUS	0.0654		
Brayton Point	BITUMINOUS	0.0654		
Antelope Valley Station	LIGNITE	0.0658		
Lawrence	SUBBITUMINOUS	0.0683	BITUMINOUS	0.0795
Clay Boswell	SUBBITUMINOUS	0.0701		
Clay Boswell	SUBBITUMINOUS	0.0701		
Clay Boswell	SUBBITUMINOUS	0.0701		
Clifty Creek	SUBBITUMINOUS	0.0711	BITUMINOUS	0.1463
Leland Olds Station	LIGNITE	0.0717		
Dwayne Collier Battle Cogeneration Facility	BITUMINOUS	0.0767		
Comanche	SUBBITUMINOUS	0.0767		
Gibson Generating Station (0300)	BITUMINOUS	0.0772		
Gibson Generating Station (1099)	BITUMINOUS	0.0772		
Wabash River Generating Station	BITUMINOUS	0.0786	PETROLEUM COKE	0.0225
George Neal South	SUBBITUMINOUS	0.0800		
Nelson Dewey	SUBBITUMINOUS	0.0805		
Widows Creek Fossil Plant	BITUMINOUS	0.0846		
Sam Seymour	SUBBITUMINOUS	0.0852		
Polk Power	BITUMINOUS	0.0858	SUBBITUMINOUS	0.0360
R.M. Heskett Station	LIGNITE	0.0881		
Stanton Station	LIGNITE	0.0883		
Stanton Station	LIGNITE	0.0883		
Charles R. Lowman	BITUMINOUS	0.0900		
Dunkirk	BITUMINOUS	0.0902		
Jack Watson	BITUMINOUS	0.0918	SUBBITUMINOUS	0.1558
San Juan	SUBBITUMINOUS	0.0918		
Mecklenburg Cogeneration Facility	BITUMINOUS	0.0932		
Port Washington	BITUMINOUS	0.0954		
Lewis & Clark	LIGNITE	0.0967		
Clover Power Station	BITUMINOUS	0.0978		
W. H. Sammis	BITUMINOUS	0.1009		
Big Brown	LIGNITE	0.1319		
Gaston	BITUMINOUS	0.1342		
Coyote	LIGNITE	0.1348		
Limestone	LIGNITE	0.1460		

Plant name	name of fuel 1	average Hg in fuel (ppmw)	name of fuel 2	average Hg in fuel (ppmw)
SEI - Birchwood Power Facility	BITUMINOUS	0.1470		
Logan Generating Plant	BITUMINOUS	0.1727		
Kline Township Cogen Facility	WASTE ANTHRACITE	0.1733		
Monticello	LIGNITE	0.1754	SUBBITUMINOUS	0.0732
Monticello	LIGNITE	0.1754	SUBBITUMINOUS	0.0732
R. D. Morrow Sr. Generating plant	BITUMINOUS	0.1958		
AES Cayuga (NY) (formerly NYSEG Milliken)	BITUMINOUS	0.3186		
Scrubgrass Generating Company L. P.	WASTE BITUMINOUS	0.7029		

Plant name	Fuel in test	T control inlet (C)	Cl in test coal (ppm)	Hg in test coal (ppm)	Hg out furnace/ Hg in coal
Bruce Mansfield	BITUMINOUS	141	767	0.0927	1.0925
Craig	SUBBITUMINOUS	139	117	0.0100	1.3182
Craig	SUBBITUMINOUS	121	267	0.0227	
Bailly	BITUMINOUS	173	646	0.0700	
AES Hawaii, Inc.	SUBBITUMINOUS	137	46	0.0267	0.5510
Bay Front Plant Generating	BITUMINOUS	134	127	0.0600	2.0220
Presque Isle	BITUMINOUS/PETCOKE	153	197	0.0393	1.2009
Presque Isle	BITUMINOUS/PETCOKE	172	190	0.0429	1.4292
Presque Isle	SUBBITUMINOUS	382	223	0.0682	0.9047
TNP-One	LIGNITE	181	133	0.2547	0.9477
St Clair Power Plant	SUBBITUMINOUS/BITUMINOUS	140	333	0.0613	0.9373
Big Bend	BITUMINOUS	155	1767	0.1383	
Navajo	BITUMINOUS	155	150	0.0303	
Valmont	BITUMINOUS	147	39	0.0079	2.1637
Intermountain	BITUMINOUS	151	200	0.0233	
Stockton Cogen Company	BITUMINOUS/PETCOKE	148	583	0.0270	1.4795
Montrose	SUBBITUMINOUS	158	133	0.0997	0.1890
Rawhide	SUBBITUMINOUS	171	127	0.0733	1.9758
Valley	BITUMINOUS/PETCOKE	157	128	0.0124	1.8615
Shawnee Fossil Plant	BITUMINOUS/SUBBITUMINOUS	158	167	0.0283	1.5706
Jim Bridger	SUBBITUMINOUS	146	50	0.0733	
Laramie River Station	SUBBITUMINOUS	138	77	0.1193	
Laramie River Station	SUBBITUMINOUS	139	74	0.1247	0.5406
La Cygne	SUBBITUMINOUS	144	300	0.1033	
Cliffside	BITUMINOUS	342	1400	0.0600	1.9574
Sherburne County Generating Plant	SUBBITUMINOUS	147	102	0.0767	1.3605
Meramec	SUBBITUMINOUS/BITUMINOUS	170	3620	0.0910	1.0291
Colstrip	SUBBITUMINOUS	139	67	0.0653	1.0864
GRDA	SUBBITUMINOUS/BITUMINOUS	156	399	0.1000	0.9573
Coronado	SUBBITUMINOUS	138	117	0.0350	
Newton	SUBBITUMINOUS	161	178	0.0707	1.3010
Salem Harbor	BITUMINOUS	126	100	0.0267	1.7010
Columbia	SUBBITUMINOUS	406	314	0.1000	1.6265
Cholla	SUBBITUMINOUS	359	50	0.0367	0.2595
Cholla	SUBBITUMINOUS	137	50	0.0400	0.7384
Platte	SUBBITUMINOUS	414	181	0.0900	1.7623

Plant name	Fuel in test	T control inlet (C)	Cl in test coal (ppm)	Hg in test coal (ppm)	Hg out furnace/ Hg in coal
Wyodak	SUBBITUMINOUS	160	25	0.0400	4.1729
Brayton Point	BITUMINOUS	154	567	0.0633	1.3004
Brayton Point	BITUMINOUS	122	967	0.0800	1.1622
Antelope Valley Station	LIGNITE	153	107	0.0620	0.5942
Lawrence	SUBBITUMINOUS	166	267	0.0477	1.0345
Clay Boswell	SUBBITUMINOUS	176	50	0.0567	0.8920
Clay Boswell	SUBBITUMINOUS	144	50	0.0630	1.0915
Clay Boswell	SUBBITUMINOUS	144	50	0.0660	0.7233
Clifty Creek	SUBBITUMINOUS/BITUMINOUS	383	441	0.0800	1.8300
Leland Olds Station	LIGNITE	202	91	0.0405	1.2793
Dwayne Collier Battle Cogeneration Facility	BITUMINOUS	168	1700	0.0300	0.7344
Comanche	SUBBITUMINOUS	145	50	0.0922	0.8542
Gibson Generating Station (0300)	BITUMINOUS	156	1867	0.1183	3.1616
Gibson Generating Station (1099)	BITUMINOUS	161	2100	0.1390	1.5660
Wabash River Generating Station	BITUMINOUS	176	600	0.0673	0.6747
George Neal South	SUBBITUMINOUS	152	191	0.0900	0.8520
Nelson Dewey	SUBBITUMINOUS/PETCOKE	257	129	0.0600	0.4330
Widows Creek Fossil Plant	BITUMINOUS	160	333	0.0247	1.5506
Sam Seymour	SUBBITUMINOUS	150	20	0.1227	
Polk Power	BITUMINOUS	171	1067	0.1000	0.6601
R.M. Heskett Station	LIGNITE	162	100	0.0863	0.8195
Stanton Station	LIGNITE	165	50	0.0823	0.5415
Stanton Station	LIGNITE	176	28	0.0835	1.1531
Charles R. Lowman	BITUMINOUS	146	367	0.0803	
Dunkirk	BITUMINOUS	305	872	0.1300	1.1636
Jack Watson	BITUMINOUS	150	761	0.0537	1.0654
San Juan	SUBBITUMINOUS	143	167	0.0537	
Mecklenburg Cogeneration Facility	BITUMINOUS	148	1893	0.0967	1.2365
Port Washington	BITUMINOUS	406	1215	0.0900	2.0011
Lewis & Clark	LIGNITE	199	100	0.1193	1.4342
Clover Power Station	BITUMINOUS	139	520	0.1594	
W. H. Sammis	BITUMINOUS	158	1233	0.1060	1.7640
Big Brown	LIGNITE	185	133	0.2880	0.7928
Gaston	BITUMINOUS	336	333	0.0593	1.3715
Coyote	LIGNITE	172	100	0.1107	1.4073
Limestone	LIGNITE	162	50	0.1390	

Plant name	Fuel in test	T control inlet (C)	Cl in test coal (ppm)	Hg in test coal (ppm)	Hg out furnace/ Hg in coal
SEI - Birchwood Power Facility	BITUMINOUS	134	917	0.1100	0.9300
Logan Generating Plant	BITUMINOUS	147	1500	0.1800	0.9117
Kline Township Cogen Facility	WASTE BITUMINOUS	188	267	0.3333	0.2675
Monticello	LIGNITE	181	167	0.3717	0.9671
Monticello	LIGNITE	176	133	0.4150	
R. D. Morrow Sr. Generating plant	BITUMINOUS	166	833	0.0500	
AES Cayuga (NY) (formerly NYSEG Milliken)	BITUMINOUS	137	882	0.1065	
Scrubgrass Generating Company L. P.	WASTE BITUMINOUS	161	600	0.5267	0.6937

Plant name	lb Hg/TBtu out furnace	F factor lb Hg/TBtu out furnace	tested control	location	fr.remove coal-stack	fremove control
Bruce Mansfield	7.3950	8.0849	PM/PARTSCRUB	no bypass	0.0799	0.1207
Craig	1.0437	1.0972	SO2/SDA	no bypass	0.1281	0.336
Craig			SO2/WETSCRUB	after bypass	0.2367	0.2819
Bailly			SO2/WETSCRUB	no bypass	0.5861	0.4795
AES Hawaii, Inc.	1.1256	0.9854	PM/BAGHOUSE	no bypass	0.788	0.5252
Bay Front Plant Generating	9.5606	2.3927	PM/MECH	no bypass	-0.4737	-0.5707
Presque Isle	3.4866	2.6811	PM/ESP- CS	no bypass	0.5802	0.5452
Presque Isle	4.7905	3.7660	PM/ESP- CS	no bypass	0.6282	0.662
Presque Isle	5.1091	4.8944	PM/ESP- HS	no bypass	0.0993	-0.0363
TNP-One	25.8893	25.8212	PM/BAGHOUSE	no bypass	0.592	0.5698
St Clair Power Plant	4.5648	4.8819	PM/ESP- CS	no bypass	0.3649	0.2023
Big Bend			SO2/WETSCRUB	no bypass	0.8235	0.6852
Navajo			SO2/WETSCRUB	no bypass	-0.2046	0.2095
Valmont	1.3706	0.9228	PM/BAGHOUSE	no bypass	0.7733	0.8652
Intermountain			SO2/WETSCRUB	no bypass	0.8384	0.7453
Stockton Cogen Company	3.2006	1.7032	PM/BAGHOUSE	no bypass	0.8927	0.9182
Montrose	1.7922	6.4935	PM/ESP- CS	no bypass	0.3572	0.0933
Rawhide	12.1599	11.6487	SO2/SDA	no bypass	-0.2564	0.3183
Valley	1.6095	1.5799	PM/BAGHOUSE	no bypass	-1.086	-0.0675
Shawnee Fossil Plant	3.2737	3.3073	PM/BAGHOUSE	no bypass	0.4974	0.682
Jim Bridger			SO2/WETSCRUB	no bypass	0.1949	0.096
Laramie River Station			SO2/WETSCRUB	after bypass	0.7338	0.6074
Laramie River Station	5.6025	6.2128	SO2/SDA	no bypass	0.7038	-0.7848
La Cygne		7.0920	PM/PARTSCRUB	no bypass	0.427	0.2215
Cliffside	8.4317	6.4487	PM/ESP- HS	no bypass	-0.1243	0.3041
Sherburne County Generating Plant	8.9438	7.9042	SO2/SDA	no bypass	-0.097	0.0446
Meramec	6.8262	6.6269	PM/ESP- CS	no bypass	0.7116	0.744
Colstrip	6.7042	6.1489	PM/PARTSCRUB	no bypass	0.1472	-0.0784
GRDA	7.8983	8.6306	SO2/SDA	no bypass	-0.0097	-0.0283
Coronado			SO2/WETSCRUB	after control	0.3061	-0.1524
Newton	8.3088	7.6144	PM/ESP- CS	no bypass	-0.1916	0.0823
Salem Harbor	3.1869	3.2345	PM/ESP- CS	no bypass	0.8298	0.8988
Columbia	13.3510	11.8709	PM/ESP- HS	no bypass	-0.2522	0.1195
Cholla	0.7940	0.9056	PM/ESP- HS	no bypass	0.642	-0.3627
Cholla	2.6512	3.1632	PM/MECH/PARTSCRUB	no bypass	0.2436	-0.0435
Platte	12.1933	10.3553	PM/ESP- HS	no bypass	-0.6753	-0.0293

Plant name	lb Hg/TBtu out furnace	F factor lb Hg/TBtu out furnace	tested control	location	fr.remove coal-stack	fremove control
Wyodak	13.6164	12.5126	SO2/SDA	no bypass	-1.44	0.4349
Brayton Point	5.7178	4.4348	PM/ESP- CS	no bypass	0.2456	0.2748
Brayton Point	6.6184	4.9119	PM/ESP- CS	no bypass	0.3111	0.2519
Antelope Valley Station	3.5496	5.9733	SO2/SDA	no bypass	0.6574	0.3333
Lawrence	4.0213	4.3987	PM/PARTSCRUB	no bypass	-0.2317	-0.1742
Clay Boswell	4.0160	3.6689	PM/BAGHOUSE	no bypass	0.8603	0.8257
Clay Boswell	5.6463	4.4349	PM/PARTSCRUB	no bypass	0.0017	0.0874
Clay Boswell	3.9282	3.6996	PM/PARTSCRUB	no bypass	0.114	-0.2191
Clifty Creek	11.6477	10.4083	PM/ESP- HS	no bypass	-0.3049	0.3403
Leland Olds Station	5.1370	4.8266	PM/ESP- CS	no bypass	-0.1279	0.0487
Dwayne Collier Battle Cogeneration Facility	1.5869	1.7035	SO2/SDA	no bypass	0.952	0.9366
Comanche	6.6021	7.0101	PM/BAGHOUSE	no bypass	0.6577	0.6259
Gibson Generating Station (0300)	32.3115	30.6737	PM/ESP- CS	no bypass	-2.0104	0.0495
Gibson Generating Station (1099)	17.3947	16.4719	PM/ESP- CS	no bypass	-0.1688	0.3572
Wabash River Generating Station	3.6393	5.3343	out of generator	no bypass	0.3253	0
George Neal South	6.2152	7.4666	PM/ESP- CS	no bypass	0.2194	-0.096
Nelson Dewey	1.9965	1.9973	PM/ESP- HS	no bypass	0.5557	-0.0897
Widows Creek Fossil Plant	2.9701	2.8976	PM/ESP- CS	no bypass	0.2991	0.5216
Sam Seymour			SO2/WETSCRUB	after control	0.5624	-0.2032
Polk Power	5.2289	5.4713	no control	no bypass	0.3399	0
R.M. Heskett Station	6.5466	7.3244	PM/ESP- CS	no bypass	0.5614	0.4036
Stanton Station	3.2952	6.6754	PM/ESP- CS	no bypass	0.4409	-0.0357
Stanton Station	8.7844	6.3462	SO2/SDA	no bypass	-0.0701	0.0147
Charles R. Lowman			SO2/WETSCRUB	after bypass	0.8397	0.7324
Dunkirk	10.8768	8.3305	PM/ESP- HS	no bypass	0.1019	0.1873
Jack Watson	4.3276	4.1634	PM/ESP- CS	no bypass	0.2447	0.2923
San Juan			SO2/WETSCRUB	after control	0.1747	0.3683
Mecklenburg Cogeneration Facility	8.3530	9.9299	SO2/SDA	no bypass	0.9851	0.9881
Port Washington	12.8800	12.2227	SO2/SORBENT INJ	no bypass	0.0118	0.4489
Lewis & Clark	16.1501	16.9607	PM/PARTSCRUB	no bypass	0.1995	0.3277
Clover Power Station			SO2/WETSCRUB	no bypass	0.9671	0.7633
W. H. Sammis	14.0602	10.7427	PM/BAGHOUSE	no bypass	0.8716	0.9221
Big Brown	25.8997	27.9212	PM/ESP- CS/BAGHOUSE	no bypass	0.1002	-0.0808
Gaston	5.9456	5.2148	PM/ESP- HS	no bypass	-0.3998	-0.1719
Coyote	13.5502	12.8692	SO2/SDA	no bypass	0.1211	0.3824
Limestone			SO2/WETSCRUB	after control	-0.075	0.5102

Plant name	lb Hg/TBtu out furnace	F factor lb Hg/TBtu out furnace	tested control	location	fr.remove coal-stack	fremove control
SEI - Birchwood Power Facility	8.1477	8.6933	SO2/SDA	no bypass	0.972	0.9736
Logan Generating Plant	11.9526	12.0912	SO2/SDA	no bypass	0.9784	0.9752
Kline Township Cogen Facility	17.3101	32.0152	PM/BAGHOUSE	no bypass	0.9995	0.9975
Monticello	44.0972	43.9689	PM/ESP- CS/BAGHOUSE	no bypass	-0.2037	-0.2126
Monticello			SO2/WETSCRUB	after bypass	0.6513	0.4757
R. D. Morrow Sr. Generating plant			SO2/WETSCRUB	after bypass	0.4567	0.7575
AES Cayuga (NY) (formerly NYSEG Milliken)			SO2/WETSCRUB	no bypass	0.7205	0.6861
Scrubgrass Generating Company L. P.	43.8616	92.5118	PM/BAGHOUSE	no bypass	0.9992	0.9989

Plant name	lb Hg/TBtu out control	%rel. deviation lb Hg/TBtu out control	F factor lb Hg/TBtu out control	% rel deviation F factor lb Hg/TBtu	particulate F factor lb Hg/TBtu out control	oxidized F factor lb Hg/TBtu out control	elemental F factor lb Hg/TBtu out control	inlet last control temp (C)
Bruce Mansfield	6.2589	48%	7.0985	65%	0.1271	1.3949	5.5765	141
Craig	0.6897	2%	0.7248	3%	0.0025	0.0254	0.6969	139
Craig	1.3834	9%	1.4456	8%				121
Bailly	2.2305	11%	2.2306	11%	0.0015	0.2525	1.9766	173
AES Hawaii, Inc.	0.4452	13%	0.4606	13%	0.0012	0.0149	0.4445	137
Bay Front Plant Generating	6.9873	197%	3.5792	82%	0.6062	1.6561	1.3169	134
Presque Isle	1.2333	20%	1.2217	16%	0.0208	0.6178	0.5831	153
Presque Isle	1.2424	8%	1.2622	7%	0.0076	0.5384	0.7162	172
Presque Isle	5.0896	19%	5.0738	21%	0.0018	0.4267	4.6452	382
TNP-One	10.8506	357%	10.8596	338%	0.0414	7.7691	3.0492	181
St Clair Power Plant	3.1025	58%	3.9076	80%	0.0601	0.9790	2.8685	140
Big Bend	1.8593	22%	1.5652	20%	0.0000	0.1343	1.4309	155
Navajo	2.7208	5%	2.7359	3%	0.0214	0.0256	2.6889	155
Valmont	0.1481	6%	0.1268	4%	0.0042	0.1016	0.0210	147
Intermountain	0.2849	11%	0.2466	10%	0.0073	0.0458	0.1935	151
Stockton Cogen Company	0.2308	4%	0.1316	1%	0.0558	0.0367	0.0391	148
Montrose	6.1366	36%	5.8573	22%	0.0027	1.7884	4.0662	158
Rawhide	7.6658	52%	7.7630	64%	0.0724	0.5796	7.1110	171
Valley	1.8514	21%	1.6630	20%	0.0375	1.3053	0.3203	157
Shawnee Fossil Plant	1.0443	7%	1.0507	7%	0.0625	0.4414	0.5468	158
Jim Bridger	4.9038	37%	4.7040	35%	0.0340	0.1780	4.4920	146
Laramie River Station	2.6154	42%	3.0184	49%				138
Laramie River Station	3.0504	34%	3.3411	58%	-0.0133	-0.2722	3.6265	139
La Cygne	5.0527	105%	5.5140	132%	0.1217	0.3073	5.0850	144
Cliffside	4.9826	110%	4.3223	108%	0.1433	2.1641	2.0149	342
Sherburne County Generating Plant	7.1935	92%	7.5401	132%	0.1276	0.1455	7.2670	147
Meramec	1.9267	74%	1.7255	64%	0.0031	1.0719	0.6505	170
Colstrip	5.1853	306%	5.7264	341%	0.0873	0.3028	5.3363	139
GRDA	8.3264	114%	8.6918	60%	0.0117	0.7602	7.9199	156
Coronado	2.1357	22%	2.4468	13%	0.0509	0.0508	2.3451	138
Newton	7.6305	81%	6.9877	59%	0.0024	1.4250	5.5603	161
Salem Harbor	0.3291	14%	0.3348	16%	0.0589	0.0997	0.1762	126
Columbia	10.2732	23%	10.3097	25%	0.0034	1.8045	8.5018	406
Cholla	1.0763	47%	1.2066	50%	0.0000	0.2139	0.9927	359
Cholla	2.6906	22%	3.1864	25%	0.0000	0.1173	3.0691	137
Platte	11.4905	305%	10.6121	286%	0.0182	0.8939	9.7000	414

Plant name	lb Hg/TBtu out control	%rel. deviation lb Hg/TBtu out control	F factor lb Hg/TBtu out control	% rel deviation F factor lb Hg/TBtu	particulate F factor lb Hg/TBtu out control	oxidized F factor lb Hg/TBtu out control	elemental F factor lb Hg/TBtu out control	inlet last control temp (C)
Wyodak	8.0526	6%	7.0701	3%	0.0136	0.1152	6.9413	160
Brayton Point	3.3877	31%	3.2000	30%	0.5478	2.4042	0.2479	154
Brayton Point	3.8926	93%	3.6979	101%	0.4019	2.1687	1.1273	122
Antelope Valley Station	2.0791	169%	4.0042	324%	0.0128	0.3236	3.6678	153
Lawrence	4.755	10%	5.1181	21%	0.1349	0.3660	4.6172	166
Clay Boswell	0.6863	39%	0.6633	34%	0.0204	0.5271	0.1158	176
Clay Boswell	5.147	10%	4.0454	15%	0.0013	0.0412	4.0029	144
Clay Boswell	4.8364	24%	4.4550	35%	0.1176	0.2688	4.0686	144
Clifty Creek	8.3071	40%	6.8745	53%	0.1853	3.3834	3.3058	383
Leland Olds Station	4.0512	136%	4.0233	76%	0.0017	0.6844	3.3372	202
Dwayne Collier Battle Cogeneration Facility	0.1037	1%	0.1074	1%	0.0225	0.0190	0.0659	168
Comanche	2.6611	45%	2.5931	42%	0.0194	2.3172	0.2565	145
Gibson Generating Station (0300)	30.7445	324%	29.0614	205%	0.0069	24.9348	4.1197	156
Gibson Generating Station (1099)	12.9877	405%	9.7452	164%	0.0228	6.1032	3.6192	161
Wabash River Generating Station	3.6393	32%	5.3343	37%	0.0477	0.5454	4.7412	176
George Neal South	5.7757	66%	7.7269	75%	0.0303	3.2082	4.4883	152
Nelson Dewey	2.0488	34%	2.1349	41%	0.0207	0.1603	1.9539	257
Widows Creek Fossil Plant	1.3695	32%	1.3986	37%	0.0649	0.8161	0.5176	160
Sam Seymour	4.4806	49%	8.6353	49%	0.0498	0.1957	8.3898	150
Polk Power	5.2289	37%	5.4713	31%	0.0071	0.3951	5.0691	171
R.M. Heskett Station	3.5095	52%	3.9768	44%	0.0552	0.4895	3.4321	162
Stanton Station	3.9569	27%	6.9024	17%	0.0136	0.2496	6.6392	165
Stanton Station	8.1445	15%	6.2517	15%	0.0044	0.1361	6.1112	176
Charles R. Lowman	1.001	229%	0.9706	221%				146
Dunkirk	8.3976	195%	6.8030	145%	0.1502	4.2746	2.3782	305
Jack Watson	3.0657	49%	2.9333	24%	0.0256	2.0258	0.8819	150
San Juan	4.0847	110%	4.2854	104%	0.0447	0.2712	3.9695	143
Mecklenburg Cogeneration Facility	0.1029	2%	0.1062	2%	0.0105	0.0418	0.0539	148
Port Washington	6.359	31%	6.6916	27%	0.0110	4.4920	2.1886	406
Lewis & Clark	9.1641	99%	10.8315	76%	0.0164	0.3229	10.4922	199
Clover Power Station	0.3387	20%	0.3529	21%	0.0239	0.1914	0.1376	139
W. H. Sammis	1.0109	6%	0.8291	3%	0.0368	0.3808	0.4115	158
Big Brown	29.3912	97%	30.0889	91%	0.0413	12.6207	17.4269	185
Gaston	6.1698	104%	6.0738	75%	0.5508	3.6455	1.8775	336
Coyote	7.355	628%	7.9523	677%	0.0733	0.1686	7.7105	172
Limestone	13.8843	85%	13.6612	46%	0.1194	1.7118	11.8300	162

Plant name	lb Hg/TBtu out control	%rel. deviation lb Hg/TBtu out control	F factor lb Hg/TBtu out control	% rel deviation F factor lb Hg/TBtu	particulate F factor lb Hg/TBtu out control	oxidized F factor lb Hg/TBtu out control	elemental F factor lb Hg/TBtu out control	inlet last control temp (C)
SEI - Birchwood Power Facility	0.2444	15%	0.2379	15%	0.0092	0.1223	0.1064	134
Logan Generating Plant	0.2728	27%	0.2801	27%	0.0127	0.0270	0.2403	147
Kline Township Cogen Facility	0.0326	0.1%	0.0816	0.3%	0.0025	0.0308	0.0484	188
Monticello	56.0352	2779%	55.8686	2770%	0.0922	47.4770	8.2994	181
Monticello	16.7222	249%	18.3232	511%				176
R. D. Morrow Sr. Generating plant	2.0909	22%	2.1269	19%				166
AES Cayuga (NY) (formerly NYSEG Milliken)	2.1612	15%	2.0652	13%	0.0091	0.1465	1.9096	137
Scrubgrass Generating Company L. P.	0.0485	0.3%	0.0936	1%	0.0020	0.0367	0.0550	161

Plant name	stack temp (C)	lb Hg/TWH from coal	lb Hg/TWH from concentration	lb Hg/MWH from coal	lb Hg/MWH from concentration
Bruce Mansfield	52.3	66.34	75.24	0.00006634	0.00007524
Craig	81.9	7.31	7.68	0.00000731	0.00000768
Craig	62.0	14.66	15.32	0.00001466	0.00001532
Bailly	54.2	23.64	23.64	0.00002364	0.00002364
AES Hawaii, Inc.	133.5	4.72	4.88	0.00000472	0.00000488
Bay Front Plant Generating	133.7	74.07	37.94	0.00007407	0.00003794
Presque Isle	151.7	13.07	12.95	0.00001307	0.00001295
Presque Isle	171.9	13.17	13.38	0.00001317	0.00001338
Presque Isle	195.7	53.95	53.78	0.00005395	0.00005378
TNP-One	175.3	115.02	115.11	0.00011502	0.00011511
St Clair Power Plant	140.0	32.89	41.42	0.00003289	0.00004142
Big Bend	52.0	19.71	16.59	0.00001971	0.00001659
Navajo	49.0	28.84	29.00	0.00002884	0.00002900
Valmont	140.0	1.57	1.34	0.00000157	0.00000134
Intermountain	48.7	3.02	2.61	0.00000302	0.00000261
Stockton Cogen Company	146.0	2.45	1.39	0.00000245	0.00000139
Montrose	167.2	65.05	62.09	0.00006505	0.00006209
Rawhide	104.0	81.26	82.29	0.00008126	0.00008229
Valley	158.4	19.62	17.63	0.00001962	0.00001763
Shawnee Fossil Plant	151.3	11.07	11.14	0.00001107	0.00001114
Jim Bridger	53.7	51.98	49.86	0.00005198	0.00004986
Laramie River Station	63.7	27.72	32.00	0.00002772	0.00003200
Laramie River Station	78.5	32.33	35.42	0.00003233	0.00003542
La Cygne	72.7	53.56	58.45	0.00005356	0.00005845
Cliffside	194.5	52.82	45.82	0.00005282	0.00004582
Sherburne County Generating Plant	80.3	76.25	79.93	0.00007625	0.00007993
Meramec	158.3	20.42	18.29	0.00002042	0.00001829
Colstrip	89.0	54.96	60.70	0.00005496	0.00006070
GRDA	84.1	88.26	92.13	0.00008826	0.00009213
Coronado	48.0	22.64	25.94	0.00002264	0.00002594
Newton	167.3	80.88	74.07	0.00008088	0.00007407
Salem Harbor	128.7	3.49	3.55	0.00000349	0.00000355
Columbia	154.0	108.90	109.28	0.00010890	0.00010928
Cholla	157.7	11.41	12.79	0.00001141	0.00001279
Cholla	86.7	28.52	33.78	0.00002852	0.00003378
Platte	154.8	121.80	112.49	0.00012180	0.00011249

Plant name	stack temp (C)	lb Hg/TWH from coal	lb Hg/TWH from concentration	lb Hg/MWH from coal	lb Hg/MWH from concentration
Wyodak	81.7	85.36	74.94	0.00008536	0.00007494
Brayton Point	143.0	35.91	33.92	0.00003591	0.00003392
Brayton Point	124.7	41.26	39.20	0.00004126	0.00003920
Antelope Valley Station	84.0	22.04	42.44	0.00002204	0.00004244
Lawrence	67.3	50.40	54.25	0.00005040	0.00005425
Clay Boswell	167.7	7.27	7.03	0.00000727	0.00000703
Clay Boswell	51.0	54.56	42.88	0.00005456	0.00004288
Clay Boswell	68.0	51.27	47.22	0.00005127	0.00004722
Clifty Creek	167.3	88.06	72.87	0.00008806	0.00007287
Leland Olds Station	182.0	42.94	42.65	0.00004294	0.00004265
Dwayne Collier Battle Cogeneration Facility	85.7	1.10	1.14	0.00000110	0.00000114
Comanche	151.5	28.21	27.49	0.00002821	0.00002749
Gibson Generating Station (0300)	155.0	325.89	308.05	0.00032589	0.00030805
Gibson Generating Station (1099)	171.7	137.67	103.30	0.00013767	0.00010330
Wabash River Generating Station		38.58	56.54	0.00003858	0.00005654
George Neal South	141.3	61.22	81.91	0.00006122	0.00008191
Nelson Dewey	260.0	21.72	22.63	0.00002172	0.00002263
Widows Creek Fossil Plant	157.0	14.52	14.83	0.00001452	0.00001483
Sam Seymour	55.7	47.49	91.53	0.00004749	0.00009153
Polk Power		55.43	58.00	0.00005543	0.00005800
R.M. Heskett Station	157.7	37.20	42.15	0.00003720	0.00004215
Stanton Station	166.5	41.94	73.17	0.00004194	0.00007317
Stanton Station	93.3	86.33	66.27	0.00008633	0.00006627
Charles R. Lowman	122.0	10.61	10.29	0.00001061	0.00001029
Dunkirk	294.8	89.01	72.11	0.00008901	0.00007211
Jack Watson	152.3	32.50	31.09	0.00003250	0.00003109
San Juan	47.9	43.30	45.43	0.00004330	0.00004543
Mecklenburg Cogeneration Facility	74.6	1.09	1.13	0.00000109	0.00000113
Port Washington	205.9	67.41	70.93	0.00006741	0.00007093
Lewis & Clark	60.0	97.14	114.81	0.00009714	0.00011481
Clover Power Station	50.2	3.59	3.74	0.00000359	0.00000374
W. H. Sammis	150.7	10.72	8.79	0.00001072	0.00000879
Big Brown	167.3	311.55	318.94	0.00031155	0.00031894
Gaston	126.7	65.40	64.38	0.00006540	0.00006438
Coyote	102.3	77.96	84.29	0.00007796	0.00008429
Limestone	59.7	147.17	144.81	0.00014717	0.00014481

Plant name	stack temp (C)	lb Hg/TWH from coal	lb Hg/TWH from concentration	lb Hg/MWH from coal	lb Hg/MWH from concentration
SEI - Birchwood Power Facility	90.0	2.59	2.52	0.00000259	0.00000252
Logan Generating Plant	87.0	2.89	2.97	0.00000289	0.00000297
Kline Township Cogen Facility	173.7	0.35	0.86	0.00000035	0.00000086
Monticello	165.3	593.97	592.21	0.00059397	0.00059221
Monticello	89.3	177.26	194.23	0.00017726	0.00019423
R. D. Morrow Sr. Generating plant	86.3	22.16	22.55	0.00002216	0.00002255
AES Cayuga (NY) (formerly NYSEG Milliken)	50.1	22.91	21.89	0.00002291	0.00002189
Scrubgrass Generating Company L. P.	157.0	0.51	0.99	0.00000051	0.00000099
		* the value of MWH was estimated with an efficiency of 0.322115 for power conversion.			

You may search these terms through the use of the find or [Ctrl][f] keys.

The monthly mercury tests by coal type are reported for all units at the facility. The unit tested at the facility may burn one or more of the types of coal types that were tested for mercury. You should manually match the type of fuel during the emissions test to the types of coals measured during the year for comparison purposes.

NOTES FOR CALCULATIONS

Some FGD units were operated with an active bypass of the control device during the testing. For units with a bypass around the unit (some of the furnace gas was vented to the stack without treatment by the control device) the measured data were used to estimate the concentration and flow rates as if all of the gas were treated by the control device.

For units with multiple control devices in series, only the last control device was tested. Those units with multiple controls in series had no direct measurements of the furnace exit gas before the first control, and **those calculations of the exiting furnace gas are reported as zero in the detail data and are blank in the summary data.**

Mercury concentrations that are reported as non-detect are estimated as one half the quantification limit.

In a few cases the fraction removed is negative. These negative numbers are reported as calculated on the same basis as the other numbers, without setting the fraction to zero removal. A removal that is less than zero is a physical impossibility and should be viewed as an artifact of the test program.

The mercury loading factors (lb Hg/TBtu) are calculated by two methods, (1) the mercury rate divided by the heating rate of the coal and (2) the concentration of Hg multiplied by an F factor and corrected for oxygen content. The F factor method is thought to be more accurate because of potential problems in reporting coal feed rates and flue gas flow rates.

The two methods for evaluating the mercury loading factors (lb Hg/TBtu) may produce significantly different results. When this difference occurs, the reason is often due to test report inaccuracies of the flow rates of the gas entering the control device. In the case of Montrose, the flow rate into the control device was reported as one fourth of the total flow rate of gas, and the loading based upon this lower flow gas flow rate was also one fourth of the loading based upon concentration (F factor). Possibly three fourths of the flow was diverted to other control units.

In some of the units (Valmont, Craig Unit 3), the mercury concentrations reported for the coal analysis were less than the mercury concentrations reported during the yearly tests. In the case of Valmont, the mass balances of the mercury out of the furnace would have been better if the typical or yearly average values were used. In the case of Craig Unit 3 the mass balances are better with the reported test mercury concentrations in the coal. The reported concentrations for the test data are used for the calculations, with the possible exception of Polk (see the comment for Polk under detail data).

Speciation values were obtained for the runs that reported Hg measured as particulate, oxidized, and elemental directly downstream of the tested unit. In these cases, the fraction of Hg in the speciation was calculated as the average value of the species for the three runs, divided by the average value of the sum of all species for the three runs. The lb Hg/TBtu for each species was the product of the value for the lb total Hg/TBtu and the fraction of Hg for the species.

Speciation values were reported for Hg downstream of the tested unit. In some cases, the speciation values were measured after the return and mixing of gas that bypassed the control device. Estimation of the speciation values by material balance is believed to be in error and is not reported in the data set. Negative values for the particulate and oxidized Hg were calculated and are thought to be in error due to measurement artifacts upstream of the control device or speciation rearrangement during the bypass duct flow.

COAL TESTING TERMS

MONTH = The month of the testing, 1 is January, 2 is Feb., etc.

number measurements = The number of mercury concentrations reported for the month.

number nondetects = The number of mercury concentrations reported that were below the quantitation limit.

average Hg in fuel (ppmw) = The monthly average for the fuel type, parts per million by weight.

percent relative deviation (PRD) = The ratio of the standard deviation to the average, expressed as a percentage

standard deviation (ppmw) = The standard deviation of the monthly mercury concentrations.

highest (ppmw) = The greatest value of the mercury content reported for the month.

lowest (ppmw) = The least value of the mercury content reported for the month.

MISCELLANEOUS TERMS

Tested control = The name of the tested mercury control device(s).

LOCATION = The position of the exit sample port with respect to the bypass vent where one exists. After control means that the control exit was sampled before the return of the bypass gas. After bypass means that the control exit was sampled after the return of the bypass gas.

name of fuel = In the column heading, this term refers to the fuel type that was tested on a monthly basis.

fuel in test = The fuel type that was burned during the emissions test.

SPECIATION = Refers to the type of mercury that is present: as elemental, as oxidized, or as sorbed on particulate matter.

ELEMENTAL MERCURY = Mercury that is present in the elemental or unoxidized form in the duct or stack gas stream.

OXIDIZED MERCURY = Mercury that is present in a compound form with chlorine, oxygen, or other oxidants in the duct or stack gas stream.

PARTICULATE MERCURY= Mercury that is sorbed on the particulate matter in the duct or the stack gas stream.

UNIT NAME = Most facilities have multiple units. This is the assigned name for the unit that was tested.

average Hg in fuel (ppmw) = The average mercury concentration measured in the fuel (from 1999 year testing).

Cl in test coal (ppmw) = The average chlorine for the coal during the emissions test.

Hg in test coal (ppmw) = The average mercury for the coal during the emissions test.

Hg out furnace/ Hg in coal = The ratio of the mercury in the exiting furnace gas to the mercury in the coal. This number is expected to equal approximately one.

lb Hg/TBtu out furnace = The pounds of mercury leaving the furnace per trillion Btu in the coal. Estimated from the measured concentrations and flow rates of coal and gas.

F factor lb Hg/TBtu out furnace = The exit concentration in the furnace gas multiplied by a conversion Fuel Factor (F) and corrected for the oxygen concentration in the gas. The Fuel Factor was 9840 dscf/10^6 Btu. The oxygen correction was 20.9/(20.9-O), where O is the percent oxygen in the combustion gas.

fr.remove coal-stack = The fraction of the mercury in the coal that is removed before exiting the stack. This estimate assumes that all of the gas is treated by the control device. (corrected for bypass)

fremove control = The fraction of the mercury in the treated gas that is removed by the control device that was tested.

lb Hg/TBtu out control = The pounds of mercury leaving the control per trillion Btu in the coal. Estimated from the measured concentrations and flow rates of coal and gas.

F factor lb Hg/TBtu out control = The exit Hg concentration from the control device multiplied by a conversion fuel factor (F) and corrected for the oxygen concentration in the gas.

particulate F factor lb Hg/TBtu out control = The concentration of Hg sorbed on particulate that is measured exiting the control device multiplied by a conversion fuel factor (F) and corrected for the oxygen concentration in the gas.

oxidized F factor lb Hg/TBtu out control = The concentration of oxidized Hg that is measured exiting from the control device multiplied by a conversion fuel factor (F) and corrected for the oxygen concentration in the gas.

elemental F factor lb Hg/TBtu out control = The concentration of elemental Hg that is measured exiting from the control device multiplied by a conversion fuel factor (F) and corrected for the oxygen concentration in the gas.

Inlet last control temp (C) = The temperature in Celsius of the gas entering the control device.

stack temp (C) = The temperature in Celsius of the gas exiting the control device. In most cases this is measured in the stack.

lb Hg/TWH from coal = The Hg emissions (lb Hg) per electric power generation rate (TWH, tera watt hour) from the coal. The fuel rate and heat content is used for the energy rate from coal combustion. Assumes a power conversion efficiency of 0.322. lb Hg/TWH is one million times greater than lb Hg/MWH.

lb Hg/TWH from concentration = The Hg emissions (lb Hg) per electric power generation rate (TWH, tera watt hour) from the coal. The oxygen concentration is used to estimate the energy rate using the F factor. Assumes a power conversion efficiency of 0.322.

lb Hg/MWH from coal = The Hg emissions (lb Hg) per electric power generation rate (MWH, mega watt hour) from the coal. The fuel rate and heat content is used for the energy rate from coal combustion. Assumes a power conversion efficiency of 0.322.

lb Hg/MWH from concentration = The Hg emissions (lb Hg) per electric power generation rate (MWH, mega watt hour) from the coal. The oxygen concentration is used to estimate the energy rate using the F factor. Assumes an energy efficiency conversion to electricity of 0.322.

EMISSION MODIFICATION FACTOR = A fraction with a range of 1.0 - 0.0 that represents the ratio of the mercury discharged from a control device to the mercury present in the control device entrance. If a control device has little effect on the mercury removal, the emission modification factor will beapproximately 1.0. If the control device removes 90% of the mercury, the emission modification factor will be 0.1.

EMF = Abbreviation for Emission Modification Factor

PERCENT REMOVAL = the percent of the mercury that is removed by the control device. In general, the percent removal is presented as one number that represents the combined effect of the fuel, the boiler type, the NO_X control, the particulate control, and the SO_X control.

FURNACE/BOILER = Terms used to describe the combustion device used to convert coal into carbon dioxide and water with the chemical release of heat used to create steam for power generation. The furnace combusts fuel; the boiler converts water to steam.

SO_X = Oxides of sulfur. These include precursors of sulfuric acid, formed by reaction with water in the atmosphere.

NO_X = Oxides of nitrogen. These include precursors of nitric acid, formed by reaction with water in the atmosphere.

PM = Particulate material. Coal contains some minerals that are not consumed in the combustion process, but remain as ash or particulate material potentially discharged in the stack gas.

FUEL TYPE

ANTHRACITE = Anthracite coal is a combustible rock composed of organic and mineral materials that has formed over time by vegetative decay and mineral deposition. The properties of coal vary depending on the type of vegetative matter and the formation conditions (reference ASTM D 388-82). In general, anthracite coal has a higher heating content (Btu/lb) than bituminous coal.

BITUMINOUS = Bituminous coal is a combustible rock composed of organic and mineral materials that has formed over time by vegetative decay and mineral deposition. The properties of coal vary depending on the type of vegetative matter and the formation conditions (reference ASTM D 388-82). Bituminous Coal has a higher heating content (Btu/lb) than Subbituminous coal.

BITUMINOUS - HIGH SULFUR = Assumed to be a bituminous coal. This extra nomenclature was sought by certain units participating in the 1999 Electric Utility Steam Generating Unit Mercury Emissions Information Collection Effort (EU/ICE) in order to keep their higher and lower sulfur fuels separate.

BITUMINOUS - LOW SULFUR = Assumed to be a bituminous coal. This extra nomenclature was sought by certain units participating in the 1999 EU/ICE in order to keep their higher and lower sulfur fuels separate.

SUBBITUMINOUS = Subbituminous coal is a combustible rock composed of organic and mineral materials that has formed over time by vegetative decay and mineral deposition. The properties of coal vary depending on the type of vegetative matter and the formation conditions (reference ASTM D 388-82). Subbituminous coal has a higher heating content (Btu/lb) than lignite coal.

LIGNITE = Lignite coal is a combustible rock composed of organic and mineral materials that has formed over time by vegetative decay and mineral deposition. The properties of coal vary depending on the type of vegetative matter and the formation conditions (reference ASTM D 388-82). Lignite coal has the lowest higher heating content (Btu/lb) of the four major coal rankings.

PETROLEUM COKE = Petroleum coke (also called petcoke) is a carbonaceous by-product of the petroleum refining process and is burned as a supplemental fuel with coal.

WASTE BITUMINOUS = Waste bituminous coal reclaimed from mine waste piles.

WASTE SUBBITUMINOUS = Waste subbituminous coal reclaimed from mine waste piles.

WASTE ANTHRACITE = Waste anthracite coal reclaimed from mine waste piles.

TIRES = Tire derived fuel (TDF), that refers to the use of scrap tires as a substitute for a fossil fuel. As with petroleum coke it is burned as a supplemental fuel with coal.

FURNACE TYPE

CONV/PC = Conventional, pulverized coal-firing furnace. In pulverized-coal-fired boiler systems, coal is pulverized in a mill to the consistency of talcum powder (i.e., at least 70 percent of the particles will pass through a 200-mesh sieve). The pulverized coal is generally entrained in primary air before being fed through the burners to the combustion chamber, where it is fired in suspension.

FBC = Fluidized-bed combustor. In an FBC, combustion occurs when coal, together with inert material (e.g., sand, silica, alumina, or ash) and/or a sorbent such as limestone, are suspended through the action of primary combustion air distributed below the combustor floor. "Fluidized" refers to the state of the bed of material (fuel or fuel and inert material [or sorbent]) as gas passes through the bed.

COAL GAS = Integrated Coal Gasification Combined Cycle Units. At a coal gasification power plant the coal-fired boiler unit is replaced with a coal gasification unit coupled with a gas turbine combustor and heat recovery boiler. The solid coal is gasified by a process in which a coal/water slurry is reacted at high temperature and pressure with oxygen (or air) and steam in a vessel (the gasifier) to produce a combustible gas. This combustible gas is composed of a mixture of carbon dioxide and hydrogen and is often referred to as a synthetic gas or syngas.

CYCLONE = Cyclone firing uses several water-cooled horizontal burners that produce high-temperature flames that circulate in a cyclonic pattern. The burner design and placement cause the ash to become a molten slag that is collected below the furnace.

STOKER = Stoker-fired furnace. In stoker furnaces, coal is burned on a bed at the bottom of the furnace. The bed of coal burns on a grate. Heated air passes upward through openings in the grate.

TURBO = Turbo-fired. This furnace is a specialized form of a conventional coal-fired furnace.

WET or DRY = Furnaces are classified as either dry or wet bottom, depending on the ash removal technique. Dry bottom furnaces fire coals with high ash fusion temperatures, and dry ash removal techniques are used. In wet bottom (slag tap) furnaces, coal with a low ash fusion temperature is used, and molten ash is drained from the bottom of the furnace.

NO_X control technology

NO_X = Combustion NO_X controls. A variety of combustion control practices can be used including low NO_x burners, overfire air, off-stoichiometric firing, selective or biased burner firing, reburning, and burners-out-of- service. Control of NO_X can also be achieved through staged combustion (also called air staging).

NONOX = No combustion NO_X controls on the furnace.

SCR = Selective Catalytic Reduction (a post combustion, add-on, NO_X control device). The selective catalytic reduction (SCR) process uses a catalyst with ammonia gas (NH3) to reduce the NO and NO_2 in the flue gas to molecular nitrogen and water.

SNCR = Selective Noncatalytic Reduction (a post combustion, add-on, NO_X control device). The selective noncatalytic reduction (SNCR) process is based on the same basic chemistry of reducing the NO and NO_2 in the flue gas to molecular nitrogen and water as the SCR but does not require the use of a catalyst to prompt these reactions.

Sulfur Dioxide control technology

WETSCRUB = A flue gas desulfurization wet scrubber (FGD, [lime or limestone]), in which flue gas containing SO_2 is brought into contact with a limestone-water slurry. The SO_2 is absorbed into the slurry and reacts with limestone to form an insoluble sludge.

COMP COAL = Compliance coal has a specifically desired low sulfur content to bring emissions into compliance with SO_2 regulations. Compliance coal may be obtained through the mining of lower-sulfur coals, coal washing, and/or coal blending.

SDA = Dry lime/spray dryer adsorber followed by a baghouse. In an SDA, flue gas is contacted with fine spray droplets of hydrated lime slurry in a spray dryer vessel. The SO_2

is absorbed in the slurry and reacts with the hydrated lime reagent to form solid calcium sulfite and calcium sulfate as in a wet lime scrubber. The water is evaporated by the heat of the flue gas. The dried solids are entrained in the flue gas, along with fly ash, and are collected in a baghouse.

SDAESP = Dry lime/spray dryer adsorber followed by a cold-side ESP.

FBC = In an SO_2 control context, FBC refers to the use of a sorbent such as limestone in the furnace's fluidized bed for SO_2 control.

SORBENT INJ = Dry injection process, dry powdered lime (or another suitable sorbent) is directly injected into the ductwork upstream of a PM control device.

SORBESP = A dry injection process (mentioned above) located before a cold-side ESP.

Particulate matter control technology

ESP- CS = Electrostatic precipitator (cold-side, meaning this ESP is installed at a location downstream of the air preheater). The ESP operates by imparting an electrical charge to incoming particles, then attracting the particles to oppositely charged plates for collection. The collected particles are periodically dislodged in sheets or agglomerates by rapping or otherwise vibrating the plates.

BAGHOUSE = Baghouse (fabric filter) that collects PM by placing a fabric barrier in the flue gas path. Gas passes freely through the fabric, but particles are trapped and retained for periodic removal.

MECH/BAGHOUSE = A mechanical collector followed by a fabric filter.

ESP- HS = Electrostatic precipitator (hot-side, meaning this ESP is installed at a location upstream of the air preheater). Operates by imparting an electrical charge to incoming particles, then attracting the particles to oppositely charged plates for collection. The collected particles are periodically dislodged in sheets or agglomerates by rapping or otherwise vibrating the plates.

ESP- CS/BAGHOUSE = A cold-side ESP followed by a fabric filter.

MECH = Mechanical collector (assumed to be a cyclone collector in this database). Flue gas entering a cylinder tangentially to the wall is imparted with a circular motion around the cylinder's axis. Particles in the gas stream are forced toward the wall by centrifugal force, then downward through a conical discharge at the bottom of the cylinder.

MECH/ESP- CS = A mechanical collector followed by a cold-side ESP.

PARTSCRUB = Particulate scrubber. Particulate scrubbers operate by shattering streams of water into small droplets that collide with and trap solid particles contained in the flue gas or by forcing the gases into intimate contact with water films. The particle-laden droplets or water films coalesce and are collected in a sump at the bottom of the scrubber.

PARTSCRUB/ESP- CS = A cold-side ESP followed by a particulate scrubber.

MECH/PARTSCRUB = A mechanical collector followed by a particulate scrubber.

MECH/BAGHOUSE/ESP- HS = A mechanical collector followed by a hot-side ESP followed by a fabric filter.

ESP- HS/ESP- CS = A hot-side ESP followed by a cold-side ESP.

ESP- HS/BAGHOUSE = A hot-side ESP followed by a fabric filter.

ESP- CS/ESP- CS = Two cold-side ESPs in series. The first cold-side ESP is less efficient and requires a particle polisher for the second, more efficient cold-side ESP.